once the local market is judged open by the FCC, it is necessarily irreversibly open as far as Ameritech's actions are concerned.

III. ECONOMIC THEORIES OF "HARM"

A. Vertical Integration and Discrimination

21. Commenters allege that once Ameritech obtains interLATA approval it could engage in a number of practices that would be harmful to consumers, and hence against the public interest, such as discrimination, cross-subsidization, and non-cooperation. We review each of these to show that there is little likelihood of adverse effects. Indeed, if these risks were as great as alleged by commenters, we would expect to be able to detect the harmful effects of Sprint's integration between long-distance and local. Sprint is far from being a "small" local company, as it has 6.1 million access lines in service, 27% more than Ameritech Michigan.[22]

22. By focusing on theoretical oligopoly models, Professor Hall (and other commenters) fail to appreciate the basic points we are trying to make with regard to Ameritech's alleged incentives to degrade the service of its rivals in the interexchange market. First, the gain to the LEC from such behavior is proportional to its market share in the provision of interexchange services. It cannot even hope to profit from such illegal activity unless it has a significant market share. Hall and others seek to dodge this issue by appealing to oligopoly models in which the LEC must, by assumption, achieve a large share of long distance service by virtue of its ability to raise its rivals costs. This does not alter the fact that actual market share is crucial in determining the potential gain from this illegal activity. Second, degrading the capabilities of one's customers is never good business, even if Ameritech had the capability to do so undetected, which it does

[22] FCC, Statistics of Common Carriers, 1995. See Table 2.10, Operating Statistics Of Telephone Companies As Of December 31, 1995.

not. The LEC makes money by helping IXCs serve customers not reached by its long distance subsidiary.

23. The combined message of these two points is that, at any point in time, there is a tradeoff between the gains from better serving one's customers and disadvantaging one's rivals, and the terms of this trade off are directly related to the LEC's long distance market share. This issue has already been examined very recently by this Commission, which concluded that:

> "commenters argue that the incumbent LEC will be able to ... degrade the service of IXC competitors, by blocking calls at its own switch. Based on this record, we conclude that these concerns are not well-founded ... incumbent LECs have compelling incentives to deliver interstate calls to an IXC's POP. As competition develops for local service, it appears doubtful that an incumbent LEC would find it advantageous to block deliberately interstate calls placed by their end user customers. Such practices would encourage entry by new competitors and increase the interest of affected end users in finding a more reliable service provider. We also find it unlikely that either originating or terminating incumbent LECs would intentionally risk the collection of often significant per-minute access charge revenues on a completed long-distance call in order to collect additional, much smaller per-call setup charges. Finally, we know of no significant allegations of degraded service quality attributable to the very similar current regime. We are prepared, however, to investigate claims that an incumbent LEC is blocking calls in an intentional or discriminatory manner."[23]

24. However, for the completeness of the record, we now turn to a more detailed review of the theoretical prerequisites for the kind of discrimination that commenters allege is likely to occur.

B. Prerequisites for Discrimination

25. To evaluate the likelihood of downstream discrimination by an upstream monopolist, we have to evaluate all of the following necessary conditions:

- Ability to discriminate;
- Incentive to discriminate;

[23] See FCC *First Report and Order*, In the Matter of Access Charge Reform, Price Cap Performance Review, Transport Rate Structure, End-User Common Line Charges, Dockets No. CC 96-262, CC 94-1, CC 91-213, CC 95-72, May 7, 1997, at ¶142

- Incentives for firm coordination;
- Detection probability and penalties.

26. The over-simplistic model submitted by Economides and Mayo (E-M) masks many relevant facts. For example, commenters Economides and Lehr show in an earlier article that:

> "First, **network quality and total surplus are higher and prices are lower when there exists a vertically integrated firm offering a complete system**. This suggests that the reintegration of local and long distance carriers may improve total welfare and incentives to invest in higher quality telecommunications infrastructure."[24] [emphasis in the original]

27. The E-M affidavit makes much use of an earlier discussion paper by Economides which purports to show that an integrated monopolist always has an incentive to selectively raise downstream rivals' costs when the downstream market is in a Cournot equilibrium.[25] There are several problems with Economides's approach.

28. Economides assumes, with no evidence, that Ameritech possesses a costless ability to selectively raise its rivals' costs while leaving its own downstream affiliate unaffected. We refer to the initial Kocher affidavit as a demonstration of why it would be extremely costly and impractical for Ameritech to implement downstream discrimination, and how these activities would almost certainly affect its own subsidiary too.[26] As we reported above, this Commission has also determined concerns of this type not to be "well-founded."

29. Proponents of the arguments that the BOCs can raise their downstream rivals' costs by acts of omission (e.g., non-cooperation) or by the selective adoption of technology (which disadvantages the downstream rivals) miss the important effects of vertical efficiencies on innovation and technology adoption. Put simply, the BOC's participation downstream may make

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[24] Nicholas Economides & William Lehr, "The Quality of Complex Systems and Industry Structure," p. 18, in William Lehr, ed., Quality and Reliability of Telecommunications Infrastructure, Lawrence Erlbaum, New Jersey, 1995.

[25] Economides, Nicholas, (1997), "The Incentive for Non-Price Discrimination by an Input Monopolist," Discussion Paper No.480, Center for Economic Policy Research, Stanford University.

[26] Affidavit of Daniel J. Kocher in this application, hereafter Kocher Affidavit.

it more susceptible to adopting technology that enhances overall welfare technology, as it now has a stake in both markets. For example, if BOCs were not participating in the cellular market, they might not have an incentive to cooperate with the cellular carriers in the development of the features in the special wireline-wireless interconnection protocols whose benefit is confined to the cellular carriers. Once the BOC participates downstream, its affiliate would share in the benefits, and the incentives for efficient technology adoption would increase. The presence of non-discrimination regulations then ensures that the benefits from this technology adoption are not confined to the BOC's downstream affiliate, but are instead shared with the other downstream providers.

30. Economides' results also apply only in an equilibrium, in which his model makes the unrealistic prediction that the BOC's subsidiary will always have the largest market share. For purposes of evaluating this application, we have to remember that Ameritech currently has a 0% share of interLATA service in Michigan. Therefore, whatever its equilibrium share might be, the market has to be in "disequilibrium" until Ameritech gets there, which is precisely the point of Sibley and Weisman's analysis: the incentive to discriminate is not present until Ameritech's market share reaches a certain threshold.[27] By that time downstream companies would be able to integrate backwards if necessary.

31. The adverse welfare implications in Economides' model arise from his assumption that the upstream monopolist is already participating in the downstream market, and therefore does not consider the welfare gains that will be unlocked by the additional entry downstream. The proper equilibrium comparison would be between consumer welfare when there is structural separation and only a given number of firms participating downstream, and consumer welfare when the upstream monopolist participates downstream.

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[27] See Sibley, David and Dennis Weisman, "Raising Rivals' Costs: The Entry of an Upstream Monopolist into Downstream Markets," working paper, March 1997.

32. Economides' model ignores the possibility of upstream competition. If the "local market is irreversibly open," then the upstream monopolist cannot engage in downstream discrimination willy-nilly, because entrants will discipline it by competing upstream. Numerical simulation using Professor Economides' model indicates that the discrimination strategy he postulates becomes unprofitable if it causes the BOC to lose even a little bit of the upstream market to competitors.

33. In Economides' model, the BOC subsidiary has to perform a complicated balancing act when setting its output, and the model result relies on the subsidiary managing this perfectly. The model requires the BOC separate subsidiary to fully internalize not only the true marginal cost of access, but also to consider the fact that it pays a transfer payment to the parent while other unaffiliated downstream providers pay cash for access. This approach ignores the legion of important principal-agent problems which characterize firms made up of real people, and which are a crucial foundation for the separate subsidiary requirements. In their affidavit, E-M assume that the firm can somehow maximize its integrated profits, bypassing the web of complicated compensation arrangements that would be required to induce those responsible for managing interconnection to sabotage their customers, and thus their own performance, in order to favor a distant division. As we showed in our previous affidavit, IXCs carefully monitor the quality of access, and would detect problems long before customers would notice them, and they are not reluctant to go to the court or regulators to enforce their statutory and contractual rights. The civil and antitrust penalties that could result would be enormous. In short, the kind of coordination Professors Economides and Mayo take for granted in their model carries a significant risk of a highly negative outcome, which makes it extremely unlikely from the point of view of individual agents in the cooperation, and probably not good corporate profit maximizing strategy either.

34. In Sibley and Weisman's "Model II", upstream and downstream divisions maximize profits independently.[28] Professors Economides and Mayo claim that even in this setup the integrated firm has incentive to discriminate at sufficiently high levels of discrimination damage. This claim is hollow as it masks the fact that profitability is seriously reduced at intermediate levels of discrimination damage, and that the required level of discrimination damage that has to be inflicted just to break even is enormous. Using the assumptions put forth by MCI experts Drs. Baseman and Warren-Boulton,[29] which we assume are plausible just for argument's sake, and the results in Professors Economides and Mayo's affidavit, we find that Ameritech would need to raise its rivals' costs by at least 100% before the corporation as a whole broke even. In so doing it would increase its downstream affiliate's market share to well over 60%- and this before it even starts making a penny on the alleged discrimination. We obtain an equivalent result when we use data put forth by AT&T's experts Professors Hubbard and Lehr, and our calculations are attached in the Appendix. Therefore, effective separate subsidiary and imputation requirements would make it highly unlikely that Ameritech would impose discriminatory costs on unaffiliated downstream providers.

35. Congress and the FCC imposed imputation and separate subsidiary safeguards because they work, as demonstrated by the experience of other industries described in our original affidavit.[30] That is not to say that they need to work perfectly, but just enough to blunt the upstream-downstream coordination incentives. And that is the key - when the subsidiary fails to internalize the marginal cost of access, the Economides and Mayo results generally do not hold.[31]

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[28] See Sibley and Weisman, *op. cit.*, pp. 12-16.

[29] See Baseman and Warren-Boulton Affidavit, ¶ 30, note 21.

[30] See Joint Affidavit of Richard J. Gilbert and John C. Panzar on behalf of Ameritech Michigan, FCC CC Docket No. 97-137, May, 1997, ¶¶ 26-27. Hereafter referred to as Gilbert and Panzar Affidavit.

[31] As we have shown, the results in this case hold only for unrealistically high levels of discrimination, which would lead to large market shares for the BOC affiliate, implying that the alleged discriminatory conduct would be easily detected.

36. We also have to consider that the E-M model ignores other real-world complications such as upstream competition, capacity constraints, and regulatory penalties. Introducing any of these factors into their models nullifies or seriously weakens their conclusions that the upstream monopolist always has an incentive to discriminate against unaffiliated downstream competitors. Intuitively, discrimination will not be profitable if it leads to a large loss of the formerly monopolistic upstream market to a new entrant. And given that substantial access competition in Michigan already exists (e.g. Ameritech estimates that in Grand Rapids CAPs and CLECs have captured a 48% share of new DS-1 lines[32]), the correct conclusion is that discrimination would accelerate Ameritech's loss of market share. Further, if the downstream subsidiary is capacity constrained, its ability to profit from the discrimination is reduced, which in turn weakens the incentive to discriminate in the first place. Finally, the E-M model is silent on regulatory penalties. The plain language of the Act requires non-discriminatory provision, so the behavior they posit is illegal. Even if the probability of detection were small, a large penalty administered by either the regulatory or civil litigation process would be sufficient to tilt the calculus against discrimination. This Commission, of course, retains power over the ultimate sanction, withdrawal of interLATA authority. The consequences on the company and its officers of obtaining interLATA authority only to lose it at a later date would be enormous.

37. Therefore, when all these issues relating to the pertinent regulatory and legal framework are considered, and taking into account the openness of the local market, we believe that E-M's conclusions are not applicable to the current situation as their assumptions do not fit the case at hand.

C. Access Charge Issues

38. Commenters' experts almost uniformly argue that Ameritech will have an artificial advantage in the provision of long-distance, because, they allege, the separate subsidiary could

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[32] See Gilbert and Panzar Affidavit, ¶ 68.

disregard the access transfer price and consider only the economic cost of access provision to the parent company when making its pricing and output decisions.[33] This argument is deficient in several respects. First, the alleged behavior that gives rise to the "artificial advantage" is highly unlikely, because of the accounting separation and separate subsidiary requirements, the FCC and state-level imputation tests, and the coordination problems we discussed above.

39. Moreover, even if the alleged behavior actually came about, the commenters' criticism misses the point because, contrary to their assertions, the downstream equilibrium is demonstrably more efficient and consumer welfare is increased, as it avoids double marginalization, expands output and lowers downstream prices. Below we summarize just such an example submitted by MCI's experts Drs. Baseman and Warren-Boulton (BWB).[34] While we do not accept the validity of their assumptions, this example does show rather well that the kind of entry that commenters allege would "harm competition" is in fact in the public interest as it increases consumer welfare.

40. In this example, the IXC's marginal cost of long-distance is 10¢/minute, and the regulated access charge is 10¢/minute. The IXC prices at its marginal cost of 20¢, and initial consumption at this price is 100 minutes. Continuing with the BWB example, the BOC affiliate then enters, offering a usage price of 10¢/minute, which is equal to BWB's assumed <u>true</u> combined marginal cost of access plus long distance. Given the assumed unit elasticity over the 20¢-10¢ arc, the consumer would switch to the BOC affiliate, and consume 200 minutes at the new lower price. The consumer enjoys a price reduction of 10¢ on his old consumption of 100 minutes (a savings of $10), which represents a straight transfer of surplus from the producers to the consumer. The consumer also enjoys surplus on the incremental 100 units consumed, the result of the difference between his willingness to pay (which declines steadily from 20¢ to 10¢

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[33] See Baumol Affidavit, ¶¶ 12-14, Bernheim, Ordover and Willig Affidavit, ¶ 60, Hubbard and Lehr Affidavit, ¶¶ 90-94, Baseman and Warren-Boulton Affidavit, ¶¶ 30-31, Hall Affidavit, ¶¶ 81, 93-97.

[34] See Baseman and Warren-Boulton Affidavit, ¶ 30, note 21.

for every incremental minute) and the market price for this increment. Assuming a linear demand curve, this "welfare triangle" represents an additional $5 of consumer surplus (given by 1/2x(20¢-10¢)x100=$5). Note that this "welfare triangle" represents a pure gain to society from increased allocative efficiency. Consumer welfare has thus increased by $15 in this example.

Table 1: Increase in Consumer Welfare From BOC Entry

Assumptions		
Elasticity	-1.0 (on 20¢-10¢ arc)	
Regulated Access Charge	10 ¢/minute (both ends)	
Marginal Cost of Long Distance	10 ¢/minute	
Consumer Choices	**Pre BOC Entry**	**Post BOC Entry**
Chosen Plan	IXC Plan	BOC Plan
Per Minute Rate	20 ¢/minute	10 ¢/minute
Minutes demanded / month	100	200
Consumer Welfare		
Gain on Original Consumption		$10
Gain on Incremental Consumption		$ 5
Total Increase in Consumer Welfare		$15

41. BWB postulate that the BOC would recapture most of the consumer welfare through a fixed per-month charge, but that's beside the point. To get the business, the BOC has to offer the consumer a better deal, and hence make him or her better off, thus increasing welfare. The result is explored in more detail in a submission before this Commission by Schmalensee et. al.,[35] which shows consumer welfare would be enhanced by BOC entry even when the BOC subsidiary is less efficient than the long-distance incumbents in providing the service. The submission concludes:

[35] See Richard L. Schmalensee, William E. Taylor, J. Douglas Zona and Paul J. Hinton, "An Analysis of the Welfare Effects of Long Distance Market Entry by an Integrated Access and Long Distance Provider," Written Ex Parte Filing on Behalf of the United States Telephone Association, FCC CC Docket No. 96-262, March 7, 1997.

- First, consumer welfare *"is higher when a vertically-integrated firm enters the long distance market even if such entry were to displace a more efficient rival (i.e. the market share of lower-cost rivals declines)."*[36]
- Second, *"under conditions that reflect the current characteristics of the long distance market, welfare is generally higher when an affiliated long distance provider acts as part of an integrated firm, rather than independently maximizing profits from access and long distance."*[37] (emphasis in original)

D. Price Squeezes

42. Commenters allege the possibility of both predatory and discriminatory price squeezes.[38] AT&T's commenter Bork has previously indicated that predatory pricing is highly unlikely and that the laws prohibiting it "should be forgotten."[39] We would consider that it is even less likely here given the characteristics of this industry. As we have shown in our initial affidavit, predatory squeezes are extremely unlikely because IXCs are large and well capitalized, and would be unlikely to exit a business with large, extremely sunk assets.

43. Ameritech could not even implement a discriminatory price squeeze because of the nature and history of access charges, which have been steadily falling and are under continuing pressure to be reduced, and which are effectively price capped. Further, a discriminatory price squeeze would be easy to detect, as access charges are tariffed, and would not pass regulatory muster, as access charges must be approved by either the Michigan PSC or the FCC. Even if Ameritech somehow managed to dupe regulators, standard antitrust remedies have been shown to be effective.

44. It could be argued that Ameritech could 'persuade' AT&T and MCI to slow down their entry into local service provision by threatening to harm them by depressing long-distance

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[36] Schmalensee et. al., *op. cit.*, p. 6.

[37] Schmalensee et. al., *op. cit.*, p. 7.

[38] See Baumol Affidavit, ¶¶ 14, 41(a), Hubbard and Lehr Affidavit, ¶ 93, Baseman and Warren-Boulton Affidavit, ¶¶ 32-34, Allen and Gropper Affidavit, ¶ 73.

[39] Robert H. Bork, The Antitrust Paradox: A policy at war with itself, (1978), pp. 144-145, reported in Predatory Pricing, American Bar Association Section of Antitrust Law Monograph 22, 1995.

prices. But this is an empty threat - if AT&T were to start providing Michigan local service, the "damage" would be done, and it would not be in Ameritech's interest to retaliate by depressing long-distance prices - and the economics literature shows us that threats which are not credible are largely worthless. Further, Ameritech faces competition from many "pure" local providers, such as Brooks, MFS and TCG, against which threats to depress long-distance prices would be useless.

E. The Terminating Access Critique is Flawed

45. Professors Bernheim, Ordover and Willig (BOW) argue that because consumers of interexchange service cannot choose the provider of terminating access, the BOC has an incentive to degrade terminating access for unaffiliated IXCs, thereby degrading the overall service quality of the competitors to its downstream affiliate. This quality degradation would create a pricing cushion for the BOC affiliate, they claim, allowing it to charge a premium, supracompetitive, price for its undegraded service. They further argue that because of the externality involved (the customer who chooses cheaper, more efficient, or undegraded terminating access, is not fully compensated for the savings as some of the benefits accrue to others), the BOC will be able to sustain its market power, presumably indefinitely. [40]

46. This critique is flawed, as it does not consider the bargaining potential between the unaffiliated IXCs and the alternative providers of terminating access. Consider BOW's proffered example, where the BOC can somehow impose a 5¢ cost penalty on terminating access on all unaffiliated IXCs, and consequently the BOC long-distance affiliate can charge 4¢ more than its competitors for its undegraded service. Suppose, the unaffiliated IXC price is 20¢, and that therefore the BOC affiliate can charge 24¢ and attract sizable traffic. According to the BOW critique, the existence of this "pricing cushion" alone would not be a sufficient incentive for the

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[40] See Bernheim, Ordover and Willig Affidavit, ¶¶ 39-43

BOC's current local service customer to select an alternative access provider (e.g., a CLEC). This may be correct as far as it goes, but it ignores the incentives of the CLEC.

47. The CLEC will observe the pricing cushion, and realize that it represents a profitable market opportunity to sell high quality terminating access. The unaffiliated IXC too realizes that it faces a quality disadvantage, and calculates that it could raise its quality, and hence its price, if it purchases high quality terminating access. It can therefore offer the CLEC a premium for terminating access over what it pays the BOC for the degraded service. In this case, the IXC should be willing to pay up to the full 4¢ differential. To induce the BOC customer to switch his or her local service provider, the CLEC can simply pass part of its gain on terminating access sales back to the customer, in the form of lower monthly rates, or rebates based on incoming traffic. Either way, the bargaining between the unaffiliated IXC, the CLEC, and the BOC customers will result in a loss of local service share for the BOC, and competition by the CLECs will therefore reduce the BOC's market power.

48. The externality identified by BOW can thus be resolved by a contract and set of transfer payments between the various involved parties (the called customer, the IXC and the CLEC), which is a recognized and standard approach to solving externalities. Thus, we have shown that BOW's terminating access critique is flawed on at least one count. We also note that Kocher demonstrated in his original affidavit that Ameritech does not have the ability, with current technology, to add "noise" to a subscriber line <u>only</u> when it is being used to provide terminating access to an unaffiliated IXC. We further note that Congress has already examined this issue, and found it wanting, by authorizing BOCs to provide interLATA service originating out-of-region but terminating in-region.[41] Consequently, we conclude that the commenting

[41] See 1996 Telecommunications Act, 47 U.S.C. § 271 (b)(2) and (4).

experts cannot rely on the so-called terminating access externality to argue that the "potential competition is insufficient to eliminate anticompetitive concerns."[42]

F. Cooperation

49. Commenters' experts argue that *"the withdrawal of cooperation that follows from a local carrier controlling a long-distance affiliate is socially harmful... [given] the incentive to withdraw cooperation and raise costs, the balance tilts decisively... consumers benefit from continued structural separation of local and long distance"*[43] and that *"it would often be impossible to determine with certainty in a given instance that Ameritech's decision not to cooperate with an IXC was due to anticompetitive motivation rather than to an ordinary commercial disagreement"*[44]. They therefore conclude that Ameritech must be kept out of long-distance to maintain this source of cooperation.

50. This issue has already been decided by Congress. If Congress had endorsed the argument that cooperation could be maintained only by the line-of-business restrictions, it would not have passed a statute allowing Ameritech to petition for long-distance authority, nor would it have eliminated the restrictions on GTE. Indeed, it might have even imposed a new restriction on Sprint.

51. In fact, the evidence suggests that RBOCs have cooperated more effectively when they are allowed to capture a share of the benefits from innovation and efficiency, as has happened in cellular. Very specific cellular-to-wireline interconnection protocols were developed to meet the specific needs of the cellular industry, and these protocols are quite different from the standard IXC-LEC interconnection protocols. For example, industry working groups staffed mainly by LEC personnel developed a specialized version of SS7 (SS7 Wireless)

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[42] See Bernheim, Ordover and Willig Affidavit, ¶¶ 38-39

[43] See Hall Affidavit, ¶¶ 56, 106, 247.

[44] See Baseman and Warren-Boulton Affidavit, ¶ 22.

to handle the special needs of cellular, including intersystem hand-off and seamless roaming.[45] Therefore, Ameritech and the other RBOCs have actively contributed to smooth running and development of the wireless-wireline interconnection.[46] The cellular experience is also supported from developments in other adjunct markets such as Internet service, voice-mail and other information services, as we discuss below.

52. Finally, we note that the postulated impossibility of distinguishing between legitimate disagreement and raising rivals' costs cuts both ways. Most, if not all, examples of noncooperation proffered by commenters including Professors Bernheim, Ordover and Willig, could arise from legitimate disagreements that are cloaked as raising rivals' costs for the purposes of this proceeding.

G. Cost Misallocation, Cross-Subsidization & Imperfect Price-Caps

53. Commenters allege that Ameritech, if allowed into long-distance, could engage in a miscellany of cross-subsidization and cost-misallocation practices.[47] These arguments have all been made and rejected before, but we review them again for the completeness of the record.

54. First, as shown by Wilk and Fetter most of Ameritech's retail services in Michigan are price-cap regulated, including basic local service.[48] Both intrastate access and interstate

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[45] See *SS7 Wireless*, Bell Communications Research, Instructor-Led Training Summary SS7-W. The main specialized part of SS7 Wireless is the IS-41 Mobile Application Part (MAP).

[46] See Network Reliability Council (NRC) (Terry J. Yake, Task Group Chair and Ross K. Ireland, Group Mentor), Increased Interconnection Task Group II Report, January 14, 1996, p. 49: "Cellular and wireline carriers have identified and established standards and interfaces necessary for reliable line, trunk and signaling interconnections," and p. 29: "IS-41 has been developed from specific needs of the wireless "cellular" industry."

[47] "I understand that several BOCs have allocated to POTS the cost of fiber optic cable capacity, whose installation was driven solely by a desire to compete in broad-band services," Baumol Affidavit, ¶ 41(b), "Cross-subsidization will harm local exchange customers who will be forced to subsidize long-distance calling. Such cross-subsidies are contrary to the public interest.", Shapiro Affidavit, p.8, "political realities ... prevent the regulator from ignoring rate of return altogether", Baumol Affidavit, ¶ 51. Also see Bernheim, Ordover and Willig Affidavit, ¶¶ 84-88, Bork Affidavit, ¶¶ 21-29, Hall Affidavit, ¶ 109.

[48] See Joint Affidavit of G. Mitchell Wilk and Steven M. Fetter on Behalf of Ameritech Michigan, ¶¶ 54-55, and Reply Affidavit of G. Mitchell Wilk and Steven M. Fetter on Behalf of Ameritech Michigan, ¶ 16.

access are price-cap regulated too.[49] Only services deemed competitive are deregulated. Consequently, price is decoupled from cost, so misallocations have little effect on end-user prices. As AT&T's expert Baumol puts it:

> "If prices of services in which market power persists ... are constrained by the rules that we have described [imputation, non-discriminatory unbundling, TSLRIC pricing, as adopted by the Illinois CC in 1993] neither cross-subsidy nor predatory pricing should be possible."[50]
>
> "[Price caps build] on a virtue that derives from the phenomenon of regulatory lag."[51]

55. Commenters argue that even under price caps the BOC would eventually reap the fruits of discrimination when price caps are readjusted. This argument ignores the fact that the act of cost-shifting is itself costly, as resources have to be diverted to this purpose. The historical record shows that regulators frequently disallow improper cost allocation. The safeguards in the Act, the Michigan Telecommunications Act and regulation by the Michigan PSC satisfy these requirements, as demonstrated by Wilk and Fetter's affidavit.

56. Other commenters argue that the local service side could transfer physical, human or non-tangible assets to the downstream affiliate,[52] notwithstanding the elaborate accounting and non-accounting safeguards put in place by the FCC. Even if this were possible, it is not at all clear what Ameritech would gain by this behavior, given the extensive price cap regulation of its access and retail services. Hubbard & Lehr go as far as to claim that the use of the BOC's brand name by the downstream subsidiary without payment is tantamount to cross-subsidization. However, we note that a brand's value is derived from its uniqueness. If the downstream subsidiary had to purchase the use of the brand, then presumably other competitors would have

[49] *Ibid.*, ¶¶ 54-55.

[50] See Baumol & Sidak 1994A p. 119.

[51] See Baumol & Sidak 1994A p. 88.

[52] See Baumol Affidavit, ¶ 41, Hubbard and Lehr Affidavit, ¶ 97, Hall Affidavit, ¶¶ 109-110.

access to the brand name too, under the non-discrimination provisions, undermining the consumer as well as private value of the brand.

IV. Empirical Evidence From Adjunct Markets and Other Countries

A. Cellular Service

57. Commenters argue that

> "tension between cooperation and competition is much less acute in cellular than local toll or long distance. Each of the two competitors is constrained to half of the spectrum capacity,"[53]

and that therefore cellular is not a pertinent example of an adjunct market. On the contrary, it is a highly relevant example because it is a downstream market with substantial brand name economies, operated under separate subsidiaries, and highly profitable. As we have shown above, wireless interconnection evolved with RBOC participation downstream, so we should see the same effects on the evolution of interconnection as those that commenters allege would occur with RBOC participation in the provision of interLATA service.

58. Professor Hall's argument that the U.S. cellular industry was an uncompetitive capacity-constrained duopoly because of the frequency allocation is patently wrong. Both capacity (as measured by cell sites) and subscribership grew dramatically over the last decade. Even over the last five years the U.S. cellular industry sustained a 31% annual growth rate in cell sites and 38% in subscribers.[54] A large proportion of this growth came from more intensive use of the spectrum through carriers' use of cell division and digital standards. That such growth was due to expansion of existing systems, and not from the addition of new geographic markets, is demonstrated by the fact that subscribership in the top 20 U.S. markets (thus keeping

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[53] See Hall Affidavit, ¶ 28. See also Baseman and Warren-Boulton Affidavit, ¶ 81.

[54] Cellular Telecommunications Industry Association data, reported in Wireless Communications Industry, Spring 1997, Donaldson, Lufkin & Jenrette.

geographical extent and number of markets roughly constant) increased 30% per annum between 1993 and 1996.[55] Nor can it be claimed that the U.S. cellular industry was uncompetitive through an implicit or explicit market sharing arrangement. We analyzed the market shares of the wireline cellular operator in the 20 leading U.S. cellular markets, and found that this share varied from a low of 40% to a high of 63%, which would suggest the absence of an implicit market sharing arrangement.[56]

59. In our earlier affidavit we reported more than mere market share evidence. We reported econometric findings which stand wholly unrebutted: we carefully examined whether ownership by the dominant LEC of either the A or B cellular operator affected total market output, after controlling for the endogeneity of price.[57] We therefore reaffirm that the econometric evidence we provided does not support the theory that incumbent LECs discriminated against unaffiliated cellular providers, as we cannot find evidence of higher prices or lower penetration in markets where a LEC cellular affiliate competed with an unaffiliated provider. The only cellular discrimination complaint provided by AT&T experts Professors Bernheim, Ordover and Willig remained a complaint and never resulted in a finding of discrimination.

60. If anything, the example of AT&T's acquisition of McCaw is supportive of a non-discrimination finding. Professor Baumol argues that the relevant contrast with the situation at hand revolves around AT&T's production of wireless switches, and thus its role as an input supplier to McCaw.[58] The more relevant parallel with BOC interLATA authority is drawn with McCaw's role as a provider of wireless access to consumers who make long-distance calls from

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[55] See "RCR Top 20 Cellular Markets," *Radio Communications Report*, June 21, 1993, p. 10, and December 9, 1996, p. 10.

[56] See "RCR Top 20 Cellular Markets," *Radio Communications Report*, June 21, 1993.

[57] See Joint Affidavit of Richard J. Gilbert and John C. Panzar on behalf of Ameritech in this proceeding, ¶¶ 50-52.

[58] See Baumol Affidavit, ¶ 43.

their cellular phones, i.e., supply of a necessary input into the provision of long-distance. This important role was behind the equal access conditions imposed on AT&T as part of the McCaw consent decree.[59] However, the very same discrimination theories proffered by commenters in this proceeding would lead us to predict that once equal access is implemented, McCaw would have an incentive to discriminate against unaffiliated long-distance providers and in favor of its corporate parent, AT&T. We are not aware of any evidence that this effect has occurred, thus refuting the prediction of discrimination by the commenters.

61. With regard to cellular service, the variations in start dates between competing systems, the varied market shares, and the rapid growth all point to an industry that was neither capacity constrained nor governed by an implicit market sharing arrangement. As we reported earlier, both affiliated and unaffiliated competitors in key Ameritech territories seem to compete strongly, and our econometric evidence does not indicate discrimination. In this case, we conclude that the lack of evidence of discrimination indicates that Ameritech lacked either the ability or incentive, or both, to discriminate.

B. Internet Service Provision

62. Examining the experience of Internet service providers (ISPs) is highly germane, as it is a downstream market with substantial brand name economies, and operated under separate subsidiaries. While we cannot attest to its profitability, it is a highly competitive and fashionable market to be in. In this case too, the different types of LEC-ISP interconnection, which are quite different from wireless or long-distance interconnection, evolved with RBOC participation downstream. Its development would therefore be a good gauge as to the pertinence of the non-

[59] See the Competitive Impact Statement filed by the DOJ and the Final Judgment ("McCaw Consent Decree") in *United States of America v. AT&T Corp. and McCaw Cellular Communications, Inc.*, Civil Action No. I:94-CV01555, July 15, 1994. See specifically McCaw Consent Decree provisions under Part IV, Equal Access.

cooperation problems that commenters allege would occur in interconnection with RBOC participation in long-distance.[60]

63. By commenters' standards, the ILECs would be presumed to have a large incentive to discriminate because they currently do not receive access charges on traffic sent to ISPs, yet incur substantial costs. A further consideration is that, if the unaffiliated ISP is served by an interconnected CLEC, the ILEC would end up paying substantial terminating access charges. Applying the standard commenter arguments, the ILEC should have double the incentive to discriminate against unaffiliated ISPs, both to capture the downstream rents and to prevent itself from paying terminating access charges.

64. The evidence all points in the other direction. No complaints have been filed against Ameritech alleging any kind of discrimination against unaffiliated ISPs. The market for ISPs in the Ameritech region is vibrant, with 117 ISPs in Michigan alone.[61] If anything, the efforts of some of the BOCs, including Ameritech, in Internet service provision "seem to be faltering," despite "high-profile marketing campaigns."[62] This is consistent with non-discrimination.

C. Information Services

65. In our previous affidavit we reviewed the evidence from the RBOCs' participation in the provision of downstream services. The experience in information services is particularly illustrative because it is the type of market that commenters' theories would indicate to be susceptible to monopolization by the RBOCs. For example, in the proceeding where the information services restrictions were being evaluated (which led to them being subsequently lifted) Professor Shapiro made dire predictions, arguing that the risk of discrimination was too

[60] See Amir Atai, "Too Much Of A Good Thing ?" *Exchange*, Bell Communications Research, Fall '96, where five alternative types of specific public switched network to ISP interconnections are discussed. The article specifically identifies the advantages to the LEC of cooperating with the ISP on each type of interconnection.

[61] See: http:\www.boardwatch.com\michigan.html, downloaded June 20, 1997.

[62] See "Online Services Reach 20.3M Users," Multimedia Daily, April 25, 1997

great to allow the RBOCs to participate in information services. In particular, Shapiro then alleged that the BOCs would engage in the familiar litany of bad acts, including raising the price, reducing the quality, and restricting the availability of essential inputs to competing information services providers.[63] Shapiro also alleged that BOCs would have the incentive to bias their systems in their own favor and against their most threatening rivals.[64] He concluded that:

> "Lifting the information services restriction at this time would predictably result in anticompetitive consequences."[65]

Shapiro's predictions were demonstrably wrong. As AT&T commenter Baumol acknowledges:

> "After the RBOCs were permitted to offer voice-mail as an information service in 1988, for example, 'the voice mail equipment market grew threefold and prices fell dramatically"[66]

66. Our reading of Ameritech's opponents' voluminous filings indicates that they can identify only one finding of discrimination by RBOCs in information services, an oft quoted episode involving BellSouth. Not only did this not involve Ameritech, but this one instance does not indicate a recurring pattern of discrimination.

D. The Connecticut Experience

67. We refer to the reply affidavit of Robert Crandall and Leonard Waverman for a detailed rebuttal of the arguments made by commenters' experts that SNET's entry into long-distance did not increase consumer welfare.[67] It is important to note that a full assessment of the benefits of SNET's entry must include the effects on intrastate rates, as interstate rates alone cannot give the whole picture, because SNET's national rivals are constrained in their ability to

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[63] See Shapiro CCH Affidavit, ¶¶ 33-41.

[64] Ibid., ¶ 39.

[65] Ibid., ¶ 103.

[66] See Baumol & Sidak 1994A p. 132.

[67] See Reply Affidavit of Robert W. Crandall and Leonard Waverman on behalf of Ameritech in this proceeding, ¶¶ 26-34.

respond through interstate rates. Additionally, product improvements, such as SNET's introduction of one-second billing increments (instead of one-minute increments), must be included in this analysis, as they result in lower effective prices. Crandall and Waverman conclude that the estimated overall benefits of SNET's entry amount to $127 million per year, or almost $58 per year per access line in Connecticut.[68]

68. Hall and other commenters make much of the fact that SNET has chosen not to renew its billing contract to provide AT&T with billing services, implying that this was somehow illegal or anticompetitive.[69] We point out that AT&T was already billing its large Connecticut customers in-house, and that there are plenty of alternative sources for billing services in Connecticut (e.g., other IXCs, non-telecom utilities, wireless providers). Therefore, billing is neither an essential facility nor a bottleneck resource. Consequently, such a choice by a competitive supplier in a competitive market cannot be considered anticompetitive. Further, if cooperation between competitors on such services really were such a good idea, as Professor Hall contends, then presumably MCI or Sprint should bill on behalf of AT&T.

E. Vertical Integration Has Promoted Local Competition

69. Commenters allege that downstream entry would have an "important chilling effect *on local telephone competition*."[70] Rather than engaging in a theoretical debate, we believe that examination of the evidence produced by actual experience is much more revealing. It is an established fact that vertical integration by the incumbent provider did not prevent the emergence of vigorous local competition in the U.K., and somewhat less vigorous local competition in New Zealand, even though the regulatory frameworks of those countries are less pro-competitive than that of the U.S. in general and Michigan in particular.

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[68] Ibid., ¶ 33.

[69] See Hall Affidavit at ¶75.

[70] See Hall Affidavit, ¶ 47. Also see Baseman and Warren-Boulton Affidavit, ¶ 6, Bernheim, Ordover and Willig Affidavit, ¶¶ 66-88.

70. It is also an established fact that in at least one case (Chile) the *de novo* entry by a local service provider into the interexchange market resulting from the lifting of a line-of-business restriction has actually intensified competition and entry into local service. Before the incumbent local service provider CTC was authorized to enter the interexchange market place in 1994, it faced only limited local service competition from two small CLECs. Free entry and the resulting fierce competition in the provision of interexchange services made the provision of integrated services so essential that nearly all major Chilean interexchange carriers have already entered or plan to enter local service. As there are no unbundling or resale requirements in Chile, construction of facilities is the only way to provide local service. Consequently, there are currently six actively competing local exchange providers in Santiago and surrounds including the two original CLECs, CMET and Manquehue, and the largest interexchange carrier, ENTEL, who is aggressively pursuing an overbuild of CTC's local network.[71]

71. The regulatory framework in Michigan is more conducive to entry into local service than that in either the UK, Chile, or New Zealand. In Michigan potential entrants have the choice of reselling Ameritech local service or leasing UNEs to build up or complement the services they are offering through self-provisioned facilities. We can therefore expect that Ameritech's entry in interLATA will have an even greater "adrenaline shot" effect on local service competition than comparable entry did in Chile.

F. Vertical Integration and Cooperation

72. Commenters allege that downstream entry by Ameritech will reduce the incentives for cooperation, allowing it to "eat the carrot," so to speak. Commenters further allege that at

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[71] For a more detailed description of the state of local service competition and its relation to the regulatory framework and CTC's downstream entry, see Cardilli, Carlo G., and Pablo T. Spiller, *"The Frontier of Telecommunications Deregulation: Small Countries Leading the Pack,"* The Journal Of Economic Perspectives, forthcoming.

this point Ameritech will cease to cooperate in the development of local interconnection, where many issues remain to be worked out.[72] However, commenters mischaracterize both issues.

73. There isn't a single "carrot" at stake, but five, as Ameritech is committed to seeking in-region interLATA authority for all of its territories. The proper way to view this process is as a multiple-shot, sequential interaction between Ameritech and this Commission. If Ameritech were to behave anticompetitively once it receives Michigan approval (e.g., withdrawing necessary technical cooperation), such actions would greatly reduce the future prospects for approval in other states, as well as putting its Michigan authorization at risk. Therefore, even if we accept for argument's sake that there are no other incentives for cooperation, Ameritech will still have an incentive for cooperation after it receives Michigan authority, in order to facilitate the receipt of authority for Illinois, Wisconsin, Ohio, and Indiana.

74. Further, Professor Shapiro raises a straw man by arguing that many of the details for local interconnection still need to be worked out, claiming that local interconnection is still relatively new. It is not, as neighboring LECs have always been interconnected to each other at the local level, and the technical requirements and procedures for local interconnection are well known and are well developed. A task group on interconnection (with representation by AT&T, MCI, Sprint among others, including MCI's expert Guggina) concluded:

> "The wireline carriers have developed processes to accommodate connection of local exchange carriers ...to both local and interexchange carriers that can serve as the basis for interconnections that should occur in the next 3 to 5 years."[73]

G. Other Evidence on Vertical Integration of Local and Long Distance

75. As we pointed out earlier, Sprint is an integrated long-distance and local service provider with more access lines than Ameritech Michigan. Therefore, all arguments advanced by

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[72] See Baseman and Warren-Boulton Affidavit, ¶ 14-16, Bernheim, Ordover and Willig Affidavit, ¶ 66, Shapiro Affidavit, pp. 3,5.

[73] Network Reliability Council (NRC) (Terry J. Yake, Task Group Chair and Ross K. Ireland, Group Mentor), Increased Interconnection Task Group II Report, January 14, 1996, p. 48.

commenters would apply to Sprint too. If Ameritech Michigan has the incentive and the ability to engage in all manner of foul play undetected by regulators, so would Sprint. Yet, as Sprint's commenter Professor Shapiro declared in a previous proceeding;

> "there is no evidence that Sprint has used its market position in local exchange services to discriminate against other IXCs or has in any other way harmed competition in interLATA services."[74]

76. The DOJ came to a similar conclusion in its 1986 review of the GTE-United joint-ownership of Sprint:

> "We found no evidence, however, of any pattern of discrimination (by Sprint)...Perhaps most significant to our assessment of the consent decree's efficacy is that none of the interexchange carriers have complained to either the Department or the FCC concerning the GTOCs' provision of exchange access to them, even in response to our solicitation of such complaints."[75]

77. We note that the DOJ did not find significant the alleged increase in Sprint's share in GTE territory, an increase which has been cited by Drs. Baseman and Warren-Boulton as evidence of discrimination. It is not possible to assess the validity of the allegation by Drs. Baseman and Warren-Boulton, and Professors Bernheim and Willig, that there were "abnormal cost increases" in local service in Sprint's territory as evidence of cost-shifting, as the Bernheim and Willig manuscript which supports this contention does not detail any evidence.[76]

78. Professors Hubbard and Lehr argue that the Chilean experience does not provide a useful parallel, because the vertically separated incumbent firms were both state-owned monopolies, and the local exchange provider was allowed to provide long-distance immediately after deregulation.[77] This argument is flawed, as the former local and long-distance monopolies

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[74] See Harris and Shapiro Reply Affidavit, p. 4.

[75] See Report to the Court of the Approval by the US Department of Justice, Pursuant to Paragraph VI(A) of the Final Judgment in *United States v. GTE Corporation*, of the Proposed Joint Venture Between GTE Corporation and United Telecommunications Inc., Civil Action No. 83-1298, June 30, 1986, p.10, as quoted in the Harris and Shapiro Reply Affidavit at p. 6.

[76] See Baseman and Warren-Boulton Affidavit, ¶ 83, citing in support B. Douglas Bernheim and Robert D. Willig, "The Scope of Competition in Telecommunications," October 1996, Ch. 4, p. 112.

[77] See Hubbard and Lehr Affidavit ¶ 142.

(CTC and ENTEL respectively) were both privatized prior to deregulation and the attendant lifting of the line-of-business restrictions.[78] We further note that the Chilean incumbent local service provider is not subject to any unbundling and resale requirements. Therefore, if discrimination and non-cooperation were a serious prospect, we should be able to detect some clear evidence here. Instead, long-distance provision in Chile has been ferociously competitive. Long-distance has become commoditized, and there has been an explosion of local competition, with duplication of loops and other outside plant. In fact, the vigorous local competition in Chile appears to be a direct result of the decision to allow the local service incumbent to provide long-distance, supporting our view that vertical integration between local and long-distance is pro-competitive and is unlikely to result in discrimination.

V. CONCLUSIONS

79. Having reviewed the relevant arguments put forth by commenters, we reaffirm our assessment that Ameritech is unlikely to discriminate against unaffiliated interLATA providers, because of the combined forces of economic incentives, lack of ability, regulation, and the threat of litigation. Our review of the evidence from other downstream markets and other countries, such as cellular, Internet service, and information services, the U.K., and Chile supports our conclusion that Ameritech's entry is likely to increase consumer welfare and thus be in the public interest.

80. We have also demonstrated that many of the issues alleged by the commenters' experts' are contradictory or inconsistent with their own current or past positions. Additionally, we have shown that many of the assumptions regarding local service competition put forth by commenters' experts are incorrect. We further demonstrated that the "checklist" requirements of unbundling and non-discrimination as mandated by the Act will accelerate the rapidly developing

[78] Both CTC and ENTEL were privatized in 1990. The line-of-business restrictions on CTC were lifted in 1994. See Cardilli and Spiller, *op. cit., passim.*